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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/530,231	04/04/2005	Young-Nam Yun	21C-0190	1269

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EXAMINER

DUONG, THOI V

ART UNIT	PAPER NUMBER
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2871

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	03/09/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

10/530,231

Applicant(s)

YUN, YOUNG-NAM

Examiner

Thoi V. Duong

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 03 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 04 April 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-10 ~~is~~ are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-10 ~~is~~ are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date 04/04/05
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Claim Objections

1. Claim 9 is objected to because of the following informalities: in line 8, "second light" should be "fourth light" since the second light is polarized by the polarizing layer to become the fourth light which is diffused by the light-diffusing layer. Appropriate correction is required.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

3. Claims 1, 3, 4 and 9 are rejected under 35 U.S.C. 102(b) as being anticipated by Maeda et al. (Maeda, US 6,285,422 B1).

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Re claim 1, as shown in Figs. 1 and 2 (Fig. 2 is annotated), Maeda discloses a liquid crystal display device 100 comprising:

- a light generating section 17 to generate first light L1;

- a polarizing member 15/16 disposed on the light generating section so as to generate third light L3 by polarizing and diffusing first light L1; and

- a liquid crystal display panel 10 disposed on the polarizing member to display an image by using third light L3 and including a first substrate 12, a second substrate 11 opposite to the first substrate and liquid crystal 13 interposed between the first and second substrates.

Re claim 3, the polarizing member comprises:

- a polarizing layer 16 positioned in opposition to the light generating section so as to generate second light L2 by polarizing first light L1; and

- a light-diffusing layer 15 (light scattering member) disposed on the polarizing layer 16 so as to generate third light L3 by diffusing second light L2.

Re claim 4, as shown in Figs. 22 and 23 (Fig. 23 is annotated), Maeda discloses a liquid crystal display device 2200 comprising:

- a light generating section 17 to generate first light L1;

- a semi-transmissive film 220 disposed on the light generating section 17 in order to allow first light L1 to pass therethrough and to partially reflect second light L2 directed in opposition to first light L1;

a polarizing member 15/16 disposed on the semi-transmissive film 220 so as to generate fifth light L5 by polarizing and diffusing first light L1 and to generate sixth light L6 by polarizing and diffusing second light L2; and

a liquid crystal display panel 10 disposed on the polarizing member to display an image by selectively receiving fifth light L5 or sixth light L6 and including a first substrate 12, a second substrate 11 opposite to the first substrate and liquid crystal 13 interposed between the first and second substrates.

Re claim 9, the polarizing member comprises:

a polarizing layer 16 positioned in opposition to the semi-transmissive film 220 so as to generate third light L3 by polarizing first light L1 and to generate fourth light L4 by polarizing second light L2; and

a light-diffusing layer 15 disposed on the polarizing layer in opposition to the first substrate 12 so as to generate fifth light L5 by diffusing third light L3 and to generate sixth light L6 by diffusing fourth light L4.

4. Claims 1-6, 9 and 10 are rejected under 35 U.S.C. 102(e) as being anticipated by Iijima (US 6,906,767 B1).

Re claim 1, as shown in Fig. 5 (annotated) (see also Figs. 2 and 3 for light distribution), Iijima discloses a liquid crystal display device comprising:

a light generating section 70 (light source) to generate first light L1;

a polarizing member 30/15 disposed on the light generating section so as to generate third light L3 by polarizing and diffusing first light L1; and

a liquid crystal display panel 20 disposed on the polarizing member to display an image by using third light L3 and including a first substrate 22, a second substrate 21 opposite to the first substrate and liquid crystal 26 interposed between the first and second substrates.

Re claim 2, as shown in Fig. 7 (annotated), the polarizing member comprises:

a light-diffusing layer 30 (light diffusing plate) positioned in opposition to the light generating section 70 so as to generate second light L2 by diffusing first light L1; and

a polarizing layer 15 (lower polarizing plate) disposed on the light-diffusing layer so as to generate third light L3 by polarizing second light L2.

Re claim 3, as shown in Fig. 5, the polarizing member comprises:

a polarizing layer 15 positioned in opposition to the light generating section 70 so as to generate second light L2 by polarizing first light L1 ; and

a light-diffusing layer 30 disposed on the polarizing layer 15 so as to generate third light L3 by diffusing second light L2.

Re claim 4, as shown in Fig. 7 (annotated) (see also Figs. 2 and 3 for light distribution), Iijima discloses a liquid crystal display device comprising:

a light generating section 70 to generate first light L1;

a semi-transmissive film 40 (reflective polarizing plate) disposed on the light generating section 70 in order to allow first light L1 to pass therethrough and to partially reflect second light L2 directed in opposition to first light;

a polarizing member 15/30 disposed on the semi-transmissive film 40 so as to generate fifth light L5 by polarizing and diffusing first light L1 and to generate sixth light L6 by polarizing and diffusing second light L2; and

a liquid crystal display panel 20 disposed on the polarizing member to display an image by selectively receiving fifth light L5 or sixth light L6 and including a first substrate 22, a second substrate 21 opposite to the first substrate 22 and liquid crystal 26 interposed between the first and second substrates.

Re claim 5, as shown in Fig. 7, the polarizing member comprises:

a light-diffusing layer 30 positioned in opposition to the semi-transmissive film 40 so as to generate third light L3 by diffusing first light L1 and to generate fourth light L4 by diffusing second light L2; and

a polarizing layer 15 disposed on the light-diffusing 30 so as to generate fifth light L5 by polarizing third light L3 and to generate sixth light L6 by polarizing fourth light L4.

Re claim 6, the light-diffusing layer 30 has a haze value above 20% (col. 9, lines 28-50 and col. 12, lines 26-31).

Re claim 9, as shown in Fig. 5, the polarizing member comprises:

a polarizing layer 15 positioned in opposition to the semi-transmissive film 40 so as to generate third light L3 by polarizing first light L1 and to generate fourth light L4 by polarizing second light L2; and

a light-diffusing layer 30 disposed on the polarizing layer 15 in opposition to the first substrate 22 so as to generate fifth light L5 by diffusing third light L3 and to generate sixth light L6 by diffusing fourth light L4.

Re claim 10, as shown in Fig. 5, the second substrate 21 comprises a color filter 27 and a first electrode 24 and the first substrate 22 comprises a switching device and a second electrode 25 opposite to the first electrode 24 (col. 12, lines 1-15).

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 7 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Iijima (US 6,906,767 B1) in view of Kawamoto et al. (Kawamoto, US 6,809,782 B1).

Iijima discloses a liquid crystal display device that is basically the same as that recited in claims 7 and 8 except the light-diffusing layer comprising coating material coated on one surface of the polarizing layer and scattering material mixed with coating material.

As shown in Fig. 1, Kawamoto discloses a polarizing member comprising a polarizing layer 12 and a light-diffusing layer 11 coated on one surface of the polarizing layer 12, wherein the light-diffusing layer 11 comprising coating material and scattering material mixed with coating material and wherein the coating material comprises acryl-based resin and scattering material includes silica particles (col. 2, line 66 through col. 3, line 37 and col. 4, lines 25-49).

Thus, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the liquid crystal display device of Iijima with the

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teaching of Kawamoto by forming a light-diffusing layer comprising coating material coated on one surface of the polarizing layer and scattering material mixed with coating material in order to inhibit coloration in viewing from a slantwise direction and attain bright displays (col. 1, lines 6-10).

Conclusion

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thoi V. Duong whose telephone number is (571) 272-2292. The examiner can normally be reached on Monday-Friday from 8:30 am to 4:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Nelms, can be reached at (571) 272-1787.

Thoi V. Duong



03/02/2007

FIG. 2

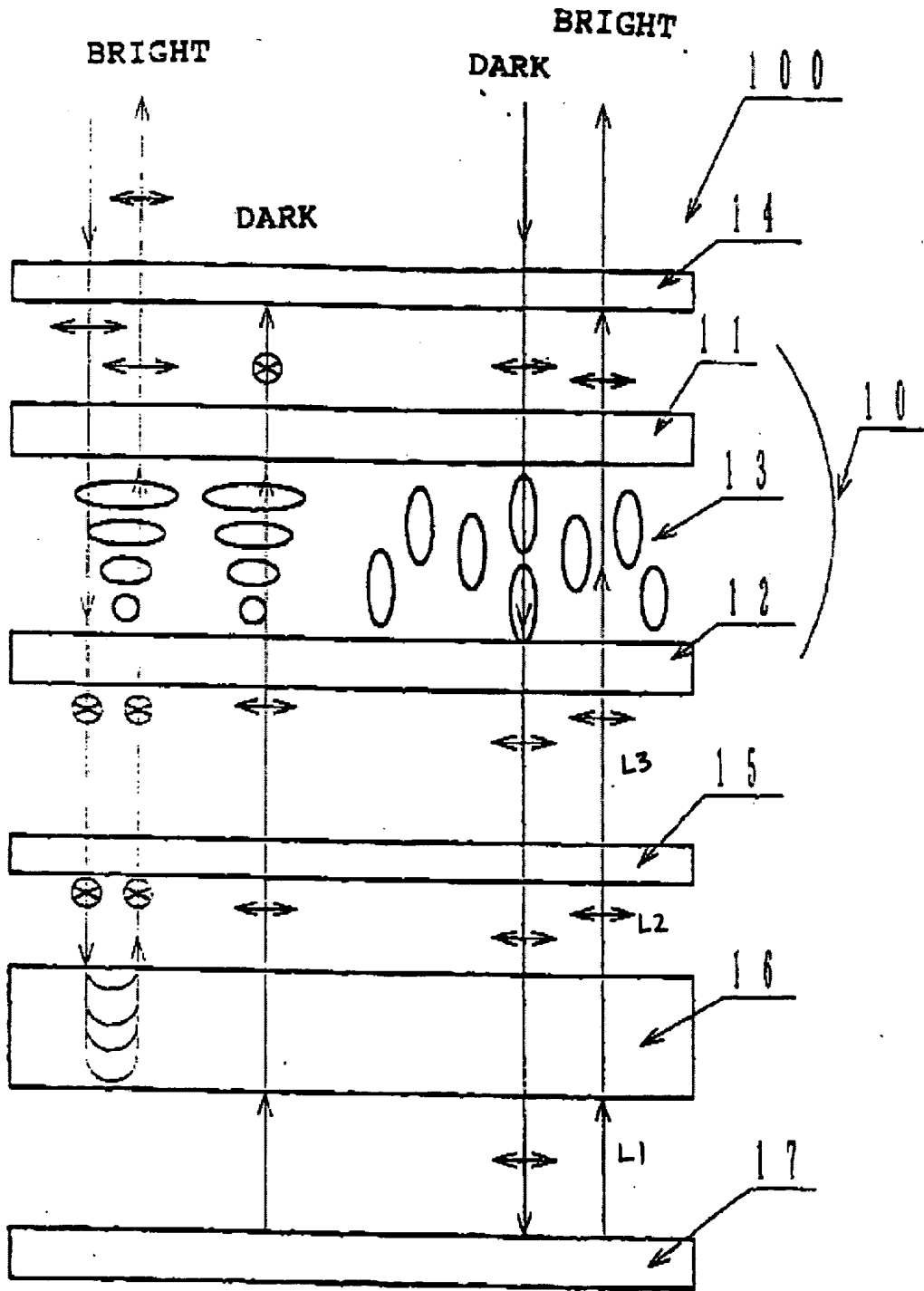


FIG. 23

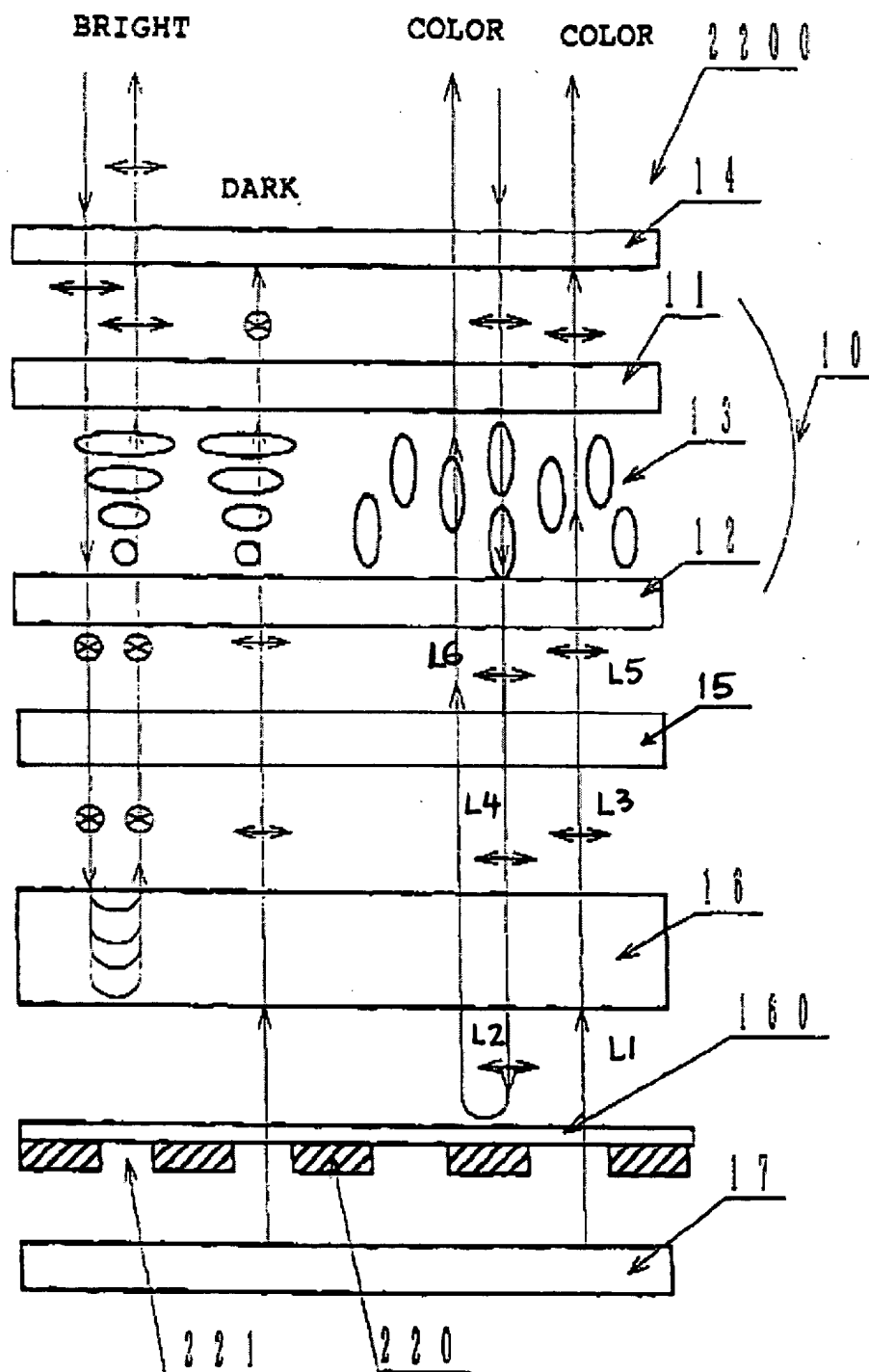


FIG. 5

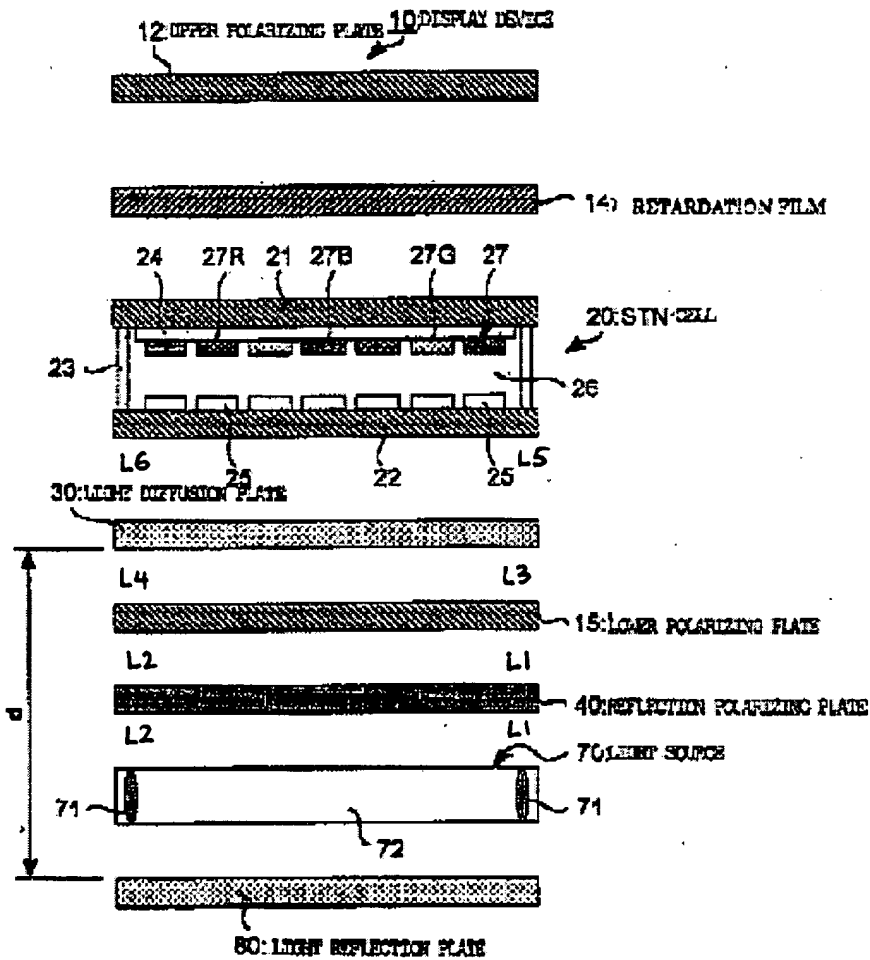


FIG. 7

